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U.S. EXPORTS TO JAPAN, BY COMMODITY, 1982

Summary

Despite the faltering pace of Japanese economic growth and the appreciation of the dollar, the performance of U.S. exports to Japan in 1982 did not turn out to be as poor as projections had indicated. Sales did drop for the first time since 1975, but only by 3.9 percent to $21 billion. Moreover, most of this decline reflected lower prices for food and feed commodities, which fell 15.7 percent to $5 billion after increasing by 9.3 percent in 1981. Exports of capital goods (including automotive products) reversed course as well, with a 7-percent decrease to $4.4 billion replacing a year-earlier gain of 9.8 percent; however, this contraction was largely the result of a plunge in aircraft sales, a volatile export item. In contrast, deliveries of industrial supplies rebounded from a 1981 drop of 5.5 percent and went up 2.1 percent to $9.2 billion, while consumer goods remained firmly entrenched in the plus column, expanding 2.9 percent to nearly $1.4 billion on top of an earlier gain of 14.3 percent.

Export Highlights

Industrial Supplies - Shipments of intermediate goods held up surprisingly well last year considering the sluggish state of Japanese industrial production and the strength of the dollar. Overbuying, though, accounted for some of this unexpected resiliency. Coking coal was a case in point. When Japanese steel makers sat down in early 1982 for their annual round of contract negotiations with U.S. and other foreign coking coal companies, they were confident that steel production, which had fallen in both 1980 and 1981, would recover at least modestly. As it turned out, the mills overcommitted for coal since steel output continued to contract, dropping to the lowest level in ten years. To make matters worse, the industry overbought in the U.S. spot market. Steel producers had significantly expanded their spot purchases of American coal in 1981 to make up for shortfalls in

contracted Australian shipments, and they continued to buy large volumes of U.S. spot-market coal in the first part of 1982, assuming that mine strikes and port delays would keep on disrupting deliveries from their top supplier. This pessimism proved to be unfounded, as Australian mines managed to deliver contracted coking coal quantities to the mills for the first time in years. From late summer on, therefore, steel makers took only part of their contracted tonnage from suppliers in this country and in Australia and Canada. Still, by year-end, American coal companies had shipped nearly 22.4 million tons of coking coal to Japan, or 2.1 percent more than in 1981. Even though weak Japanese demand for electric power and cement cut shipments of steam coal 13.7 percent to 3.4 million tons, this gain was enough to push U.S. bituminous coal exports up 3.6 percent in 1982 to $1.5 billion.

Overbuying was a factor as well behind the turnaround in U.S. wood product exports last year. Shipments of logs and lumber had tumbled by two-fifths between 1979 and 1981 as importers tried to bring inventories, swollen by speculative buying in 1979, in line with the depressed state of Japanese residential construction starts. By late 1981 stocks had been worked down to near normal levels. With the housing market showing signs of bottoming out after a three-year slide, trading companies started to step up their log purchases. American logs generated the most buying activity since prices had been driven down not only by the slump in homebuilding here but also by stiff competition among U.S. forest products firms for export business to make up for losses on their domestic sawmill operations. Some of the additional trade in U.S. logs, which expanded 11.5 percent to nearly 2 billion board feet, displaced logs cut from Japanese forests, now at a price disadvantage; some substitution of American softwood logs for Southeast Asian hardwood logs, in short supply because of export restrictions, also took place. For the year, though, there was a net increase in total Japanese log supplies, which led to an inventory buildup when the signs of a sustained housing upturn proved to be premature. Moreover, lumber imports were up sharply despite the fact that low U.S. log prices made the output of Japanese sawmills more competitive with foreign-cut lumber. This added to inventory problems but benefited the rising number of U.S. sawmills willing to cut to Japanese specifications. They upped their shipments 19.7 percent to almost 628 million board feet, helping to boost the value of log and lumber exports 2.4 percent to $1 billion-plus.

While importers' misjudgments about market conditions in Japan contributed to increased exports of coking coal and wood products, more often than not U.S producers parlayed cost advantages to expand sales of industrial supplies. Chemical products, for example, advanced 13.5 percent to over $1.3 billion, in part, admittedly, because of another big jump in shipments of radioactive isotopes but also because of increased exports of petrochemical intermediates. Lower energy costs, both for feedstocks and fuels, and larger, more efficient plants for the production of ethylene and propylene, two of the basic building blocks for intermediates, give American petrochemical manufacturers a decided edge over their Japanese competitors in both basic commodity-type products like ethylene dichloride, ethylene glycol, vinyl acetate monomer and acrylonitrile and in new intermediates or special grades of them. Exporters exploited this advantage in boosting shipments of most commodity products in 1982, but in at least one case — styrene monomer, a benzene derivative, lower U.S. costs did not prevent a sales contraction; here, apparently, the American-made product was undercut in the Japanese market by domestic producers engaged in a price war. American companies also capitalized on their lower cost structure to expand exports of petrochemical products, particularly plastic materials, chemical fertilizers and pesticides.

Access to lower-cost energy supplies has also given American makers a competitive advantage in another energy-intensive product, aluminum. Although U.S. aluminum,

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bought primarily on the spot market, must compete in Japan with ingot imported under long-term contract or from overseas "develop-import" projects, relatively strong demand there for sheet and other mill products has provided increasing sales opportunities for all foreign ingot suppliers. Last year, moreover, depressed market conditions in the United States gave exporters an additional incentive to emphasize ingot sales to Japan, which they did, boosting shipments 43.5 percent to 344,608 tons. Sales of aluminum scrap, generally used by secondary smelters to produce ingot primarily for castings, fell, however, trimming the value of ingot and scrap exports by 4.2 percent to $0.5 billion.

One of the surprise developments of 1982 was the emergence of petroleum products as a major U.S. export to Japan since Japanese imports and consumption of these products continued to drop during the year. There were parallels, though, between this development and the expansion of aluminum ingot sales. U.S. primary petroleum producers, saddled with large inventories of refined products because of weak domestic demand, also pushed exports to Japan, particularly of heavy (residual) fuel oil, used by electric utilities and industry, and light (distillate) fuel oil, generally used by industrial producers as a fuel. Added to increased deliveries of petroleum coke, the traditional mainstay of petroleum product exports, sharply higher shipments of these two types of fuel oil swelled sales of petroleum products 113.4 percent to $0.6 billion.

Not all intermediate goods escaped the fallout from the combination of sluggish industrial production in Japan and the strong dollar. Paper base stocks certainly did not, as exports contracted for the second straight year, this time by 11.1 percent to under $0.5 billion. The weak Japanese market for paper and paperboard was the primary factor behind the drop in exports. In addition, pulp producers cut their reliance on imported wood chips because of relatively high U.S. prices on top of the strong dollar and, at the same time, upped their usage of waste paper as a raw material for pulp. For U.S. pulp exporters, the operative secondary factor was the dollar's strength, although demand for their product was indirectly affected by increased consumption of waste paper.

Food and Feed - Market analysts had projected that Japanese livestock and poultry formula feed production would mark time in 1982 for the third year in a row. These forecasts, as it turned out, were wrong since output rebounded modestly to a new record. What threw market watchers off was the unexpectedly strong impact a January 1982 cut in mixed feed prices had on demand. Feed mills had lowered their prices twice in 1981, but with little effect, because livestock and poultry producers' profit margins continued to be squeezed by relatively high feed prices and generally low product prices. Coming on top of the two earlier rounds of price cutting, however, last January's reduction eased one source of the profit squeeze by lowering the dominant cost component for most raisers. Unfortunately for U.S. and other coarse grain exporters, 1982's recovery in formula feed production did not translate into higher demand for imported corn since feed compounders expanded output by stepping up the use of surplus rice and non-grain ingredients. Buyers, moreover, tried to take advantage of declining U.S. corn prices and to equalize exchange rate fluctuations by delaying purchases from the United States as long as possible and then taking only enough to satisfy immediate requirements. Together, these factors resulted in a 3.3-percent drop in American corn shipments to 450.2 million bushels. With export prices falling, though, the value of sales tumbled 28.4 percent to under $1.3 billion.

The Japanese oilseed crushing industry's requirements for imported soybeans have traditionally been determined by the demand for soybean oil, not soybean meal. In 1981, however, feed millers, in a cost-cutting move, reduced the protein meal content of feed, especially soybean meal usage. Even though vegetable oil demand was extremely buoyant, this step forced crushers to rejuggle their priorities and limit the soybean crush. Soybean meal demand, while stronger in 1981, continued to put a cap on the size of the crush last year, again despite the fact that oil consumption increased. Since the United States supplies all of the soybeans crushed in Japan, these developments placed a ceiling

on shipments in both 1981 and 1982. Export volume did increase marginally last year, edging up 1.7 percent to 149.5 million bushels, but this gain was primarily the result of the lower oil content of the U.S. crop and, perhaps, a modest rise in purchases of food-grade soybeans, which make up about one-sixth of shipments. In any case, the small volume gain did little to offset a fall in export prices, with the result that sales declined 14.8 percent to less than $1 billion.

Through its control over the volume of wheat shipped into the country and the price at which imported as well as domestic wheat are resold to flour millers, the Japanese government has tried in recent years to slow the decline in Japanese rice consumption at the expense of increased demand for wheat. The results of these policies in 1982 were the now-familiar ones of virtually no growth in wheat flour consumption and flat wheat imports. Actually, U.S. wheat exporters, who shipped 122.9 million bushels worth a little under $0.6 billion to Japan last year, were lucky to hold shipments very close to 1981's level, since Japanese wheat production reached its highest level in 13 years; moreover, demand for wheat for feed use, which accounts for nearly one-fifth of American tonnage, was off.

Capital Goods - Aggregate data on capital goods exports present a distorted picture of how well American companies scaled the twin hurdles of sluggish Japanese plant and equipment spending and the strong dollar in 1982 since almost all of the drop in sales reflected a 48.4-percent plunge in commercial aircraft sales to $0.4 billion. Like sales to other airlines, deliveries of jetliners to Japan Air Lines (JAL) and the two domestic carriers are cyclical, depending on such factors as current and projected passenger traffic, the airlines' finances, and the age of their fleets. With demand for airline services weak since 1979 because of the state of the Japanese economy, and with JAL's finances rocky for this reason as well as because of the jump in fuel prices, the three airlines cut orders despite their need for more fuel-efficient, quieter planes. As a result, they only took delivery of eight large transports in 1982, compared with 15 to 21 a year during the 1978-81 period.

The export performance turned in by American makers of data processing equipment, which lifted their sales 12.2 percent to more than $0.8 billion, was the best example of what many other U.S. capital goods industries achieved on a more modest scale in the Japanese market last year. In raising exports, computer manufacturers overcame not only the obstacles of weak capital spending and a strong dollar but also an additional handicap: aggressive Japanese competition. Competition has become particularly fierce in the fast-growing market for personal computers, small business systems, word processors and associated storage devices and printers -- a market once the province of American companies but now dominated by Japanese vendors. Since at least 1981, however, U.S. exporters have been engaged in a major rollback campaign, introducing new hardware and software products tailored to the Japanese market and broadening distribution channels. These efforts, as well as parallel steps by American manufacturers to regain share in the larger but slower-growing market for minicomputers and mainframes, were reflected in the export expension. But the main source of export growth in 1982 was parts, a major portion of which was apparently destined for International Business Machines Corp.'s Japanese manufacturing operation, where the industry giant makes a variety of mainframes.

Consumer Goods - Continuing gains in consumer goods exports in recent years have been generally attributable to pharmaceuticals. Last year was no exception, as sales of pharmaceuticals expanded 13.8 percent and topped the $0.5-billion mark. Major U.S. drug firms, with their well-established and growing manufacturing, sales and research operations in Japan, generate a considerable portion of this trade. In product lines like antibiotics, for example, the companies bring in active ingredients for formulation at

their domestic plants or import the final product if sales do not dictate local production. Exports of blood and blood derivatives, the other major product line, apparently go to Japanese organizations for research purposes, however.

Export Prospects

With the Japanese economy continuing to bump along in a rut and the dollar showing no signs of weakening, the bleak forecasts made for U.S. exports to Japan in 1982 could be realized this year. Sales of coking coal will be off by a large margin, not only because steel mills have a glut of coal in inventory or under long-term contract but also because they won significant price concessions from American suppliers on 1983 shipments. Barring a sustained turnaround in Japanese housing starts in the second half of the year, log and lumber shipments are also expected to fall, as are exports of paper base stocks. Moreover, Japanese airlines will probably take delivery of fewer jetliners in 1983 than they did last year. Agricultural exports are a big question mark. Sales could expand, buoyed by another modest gain in mixed feed production and firmer prices for corn, but higher corn prices could choke off the recovery in formula feed demand and dampen sales. On the plus side, sales of chemicals, aluminum ingot, petroleum products, data processing equipment and pharmaceuticals are projected to expand further. Gains in these products, however, might not be enough to keep total exports from falling for the second straight year.

For further information, contact Susan MacKnight.

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U.S. Exports to Japan, by Commodity, 1981 and 1982

(in millions of dollars and indicated quantity units)

Commodity	Quantity 1981	Quantity 1982	Value 1981	Value 1982	Percent Change 1981/82	Japan's Share of U.S. Exports 1982
Total Exports			$21,823.0*	$20,966.1**	-3.9%	9.9%
Industrial Supplies			8,982.6	9,172.9	2.1	14.9
Bituminous Coal	25,842,549 stn	25,766,013 stn	1,472.3	1,525.4	3.6	25.7
Coking Coal	21,901,964 stn	22,363,738 stn	1,280.5	1,350.7	5.5	34.2
Steam Coal	3,940,585 stn	3,402,275 stn	191.9	174.7	-9.0	8.8
Petroleum Products			290.9	620.9	113.4	13.5
Jet Fuel	238,853 bbl	1,511,121 bbl	10.1	61.8	511.9	46.0
Light Fuel Oils	393,658 bbl	4,428,700 bbl	16.1	168.0	943.5	16.6
Number 4-Type Fuel Oils	9,749 bbl	1,029,184 bbl	0.4	37.1	9,175.0	53.6
Heavy Fuel Oils	1,887,076 bbl	5,644,578 bbl	54.4	162.0	197.8	8.5
Lubricating Oils			45.3	26.2	-42.2	3.7
Petroleum Coke (excl. calcined)	1,886,660 stn	2,428,538 stn	93.0	109.4	17.6	28.6
Natural Gas	56,888,320 mcf	52,534,481 mcf	328.5	291.9	-11.1	99.7
Nuclear Reactor Fuels	29,089 lb	20,134 lb	179.3	114.8	-36.0	59.2
Logs and Lumber	2,298,130 mbf	2,606,263 mbf	1,020.9	1,045.3	2.4	49.9
Douglas-fir Logs	849,696 mbf	999,502 mbf	406.0	428.5	5.5	70.5
Western Hemlock Logs	689,149 mbf	769,965 mbf	276.5	285.1	3.1	71.8
Lumber	524,086 mbf	627,543 mbf	188.6	206.7	9.6	25.8
Paper Base Stocks			544.4	484.0	-11.1	25.3
Wood Chips	2,746,003 stn	2,508,090 stn	235.2	206.8	-12.1	89.5
Wood Pulp	615,719 stn	590,176 stn	297.9	265.8	-10.8	18.8
Paper and Paper Products			233.0	239.2	2.7	9.9
Newsprint	127,328 stn	176,164 stn	67.2	81.5	21.3	57.0
Kraft Linerboard	125,891 stn	117,715 stn	46.9	36.1	-23.0	6.7
Coated Container Base Stock	108,780 stn	108,834 stn	73.1	70.2	-4.0	32.2
Chemicals (excl. plastics, fertilizers and insecticides)			1,185.1	1,345.4	13.5	13.3
Cyclic Hydrocarbons			161.5	89.8	-44.4	11.6
Styrene	139,626 stn	57,937 stn	96.9	31.3	-67.7	11.3
Para-xylene	20,819,105 gal	21,127,442 gal	42.9	38.8	-9.6	17.0
Cyclic Organic Intermediate Chemical Compounds			112.6	100.1	-11.1	10.7
Acyclic Organic Chemical Compounds			286.1	351.6	22.9	15.8
Ethylene Dichloride	113,405 stn	220,895 stn	23.2	41.6	79.3	59.3
Ethylene Glycol	10,488 stn	90,953 stn	4.3	30.1	600.0	33.5
Vinyl Acetate Monomer	48,625 stn	68,661 stn	23.6	28.4	20.3	18.6
Acrylonitrile	51,652 stn	78,844 stn	30.8	47.5	54.2	19.1
Uranium and Thorium Compounds	240 stn	591 stn	136.5	336.5	146.5	39.9
Molybdenum Compounds	2,383 stn	2,666 stn	28.8	20.5	-28.8	49.0
Sodium Compounds			31.8	27.6	-13.2	5.2
Color Lakes and Toners, Dyes and Paints			33.2	34.3	3.3	7.2
Antiknock Compounds and Additives for Lubricating Oils			76.4	78.8	3.1	10.1
Compound Catalysts (excl. nickel)			25.8	28.6	10.9	13.2
Plastic and Synthetic Resin Compounds			279.3	295.5	5.8	8.8
Polyvinyl Chloride and Copolymer Resins (uncompounded)	20,085 stn	47,892 stn	15.7	25.9	65.0	19.5
Polycarbonate Resins	17,210 stn	14,720 stn	35.3	32.2	-8.8	56.9
Film, Strips and Sheets			34.0	40.8	20.0	6.8

Commodity	Quantity 1981	Quantity 1982	Value 1981	Value 1982	Percent Change 1981/82	Japan's Share of U.S. Exports 1982
Synthetic Rubber			$ 41.2	$ 49.1	19.2%	8.9%
Fertilizers and Insecticides			226.1	248.8	10.0	7.1
Crude Phosphates	1,504,179 stn	1,247,328 stn	61.2	49.7	-18.8	13.0
Fertilizers			65.1	95.9	47.3	6.9
Diammonium Phosphate Fertilizers	203,538 stn	335,358 stn	33.2	53.4	60.8	7.9
Unmixed Pesticides			41.9	48.7	16.2	7.4
Manufactured Pesticides			58.6	54.5	-7.0	9.0
Still X-Ray Film	32,466,269 sft	34,836,113 sft	28.1	27.1	-3.6	26.7
Photosensitive Papers			29.0	29.4	1.4	10.1
Steel Scrap	1,190,750 stn	1,529,568 stn	117.7	145.1	23.3	23.8
Nonferrous Ores and Scrap			503.0	367.3	-27.0	26.0
Copper Ore	128,710 stn	163,417 stn	160.5	157.2	-2.1	74.4
Copper Scrap	32,758 stn	27,913 stn	40.9	28.6	-30.1	16.7
Aluminum Scrap	175,536 stn	146,357 stn	170.8	106.1	-37.9	67.3
Molybdenum Ore	3,979 stn	2,706 stn	73.6	37.4	-49.2	16.1
Nonferrous Metals			443.2	446.7	0.8	25.3
Aluminum Ingot	240,219 stn	344,608 stn	349.3	392.2	12.3	82.4
Iron and Steel (incl. ferroalloys)			43.6	45.6	4.6	2.1
Silver	3,747,006 toz	4,467,184 toz	41.2	35.7	-13.3	31.2
Platinum and Platinum Group Metals	337,027 toz	201,231 toz	130.0	54.6	-58.0	55.3
Unmanufactured Nonmetallic Minerals			89.1	92.8	4.2	12.3
Kaolin Clay	437,560 stn	444,002 stn	47.0	52.8	12.3	35.9
Manufactured Mineral Supplies			64.7	69.2	7.0	4.5
Industrial Textile Fibers, Yarn and Fabric			86.6	71.5	-17.4	2.6
Manmade-Fiber Yarn			28.1	18.5	-34.2	3.1
Raw Cotton	1,220,897 rba	1,486,335 rba	503.6	500.6	-0.6	25.6
Whole Cattle Hides	7,495,175 pc	6,443,988 pc	255.1	207.2	-18.8	29.8
Leaf Tobacco	58,491 stn	55,159 stn	301.7	309.9	2.7	20.0
Inedible Tallow	96,474 stn	76,424 stn	39.8	33.9	-14.8	5.9
Food and Feed			5,896.2	4,971.0	-15.7	15.9
Corn (excl. seed and popcorn)	465,723,914 bu	450,200,403 bu	1,781.4	1,275.0	-28.4	22.9
Sorghum (excl. seed)	114,348,951 bu	73,621,090 bu	408.8	205.5	-49.7	29.7
Soybeans (excl. seed)	147,025,777 bu	149,458,282 bu	1,137.9	970.0	-14.8	15.6
Animal Feeds			151.6	140.3	-7.5	5.7
Dried Beet Pulp	443,756 stn	370,765 stn	63.5	49.4	-22.2	74.9
Alfalfa Meal and Cubes			40.0	55.3	38.3	65.8
Wheat	123,617,105 bu	122,924,724 bu	615.0	563.7	-8.3	8.5
Barley	13,501,566 bu	10,832,005 bu	44.8	30.5	-31.9	18.3
Fruits and Vegetables			444.7	401.2	-9.8	14.8
Lemons	128,800 stn	118,258 stn	66.3	69.1	4.2	83.9
Grapefruit	175,668 stn	154,091 stn	59.1	47.3	-20.0	48.1
Oranges and Tangerines	84,679 stn	91,502 stn	44.5	51.3	15.3	26.1
Raisins	17,821 stn	17,060 stn	29.8	25.9	-13.1	24.5
Almonds			39.7	37.0	-6.8	15.6
Onions	106,814 stn	1,827 stn	35.7	0.5	-98.6	2.7
Frozen Vegetables			57.0	53.9	-5.4	57.7
Meat and Meat Preparations			501.5	529.5	5.6	41.2
Fresh and Frozen Beef	47,262 stn	57,855 stn	157.8	232.4	47.3	66.1
Fresh and Frozen Beef Offals	35,390 stn	34,726 stn	102.7	97.0	-5.6	39.2
Fresh and Frozen Pork	43,880 stn	33,332 stn	143.2	111.4	-22.2	68.8
Fresh and Frozen Poultry	71,449 stn	60,313 stn	81.5	67.6	-17.1	23.4

Commodity	Quantity 1981	Quantity 1982	Value 1981	Value 1982	Percent Change 1981/82	Japan's Share of U.S. Exports 1982
Eggs			$ 36.7	$ 26.1	-28.9%	23.4%
Fish and Fish Preparations			552.7	600.4	8.6	60.3
Fresh and Frozen Salmon	65,446 stn	98,407 stn	252.6	316.4	25.3	78.1
Fish Roe	13,263 stn	11,106 stn	112.1	95.4	-14.9	89.6
Frozen King Crab	5,676 stn	1,691 stn	37.0	16.2	-56.2	60.4
Frozen Snow Crab	15,740 stn	10,861 stn	53.6	61.7	15.1	97.4
Capital Goods			4,766.6	4,433.8	-7.0	5.0
Nonelectric Machinery			2,732.2	2,874.1	5.2	6.0
Data-Processing Equipment			746.9	838.3	12.2	9.0
Computers			182.4	205.5	12.7	10.1
Peripheral Equipment and Parts			517.9	573.0	10.6	8.2
Disk and Tape Storage Units			62.8	63.2	0.6	5.9
Terminals			53.1	35.9	-32.4	4.1
Parts			311.3	383.5	23.2	10.1
Magnetic Computer Disks and Tapes			36.5	27.1	-25.8	11.6
Semiconductor Production and Assembly Equipment and Parts			151.3	153.6	1.5	28.8
Measuring, Testing and Controlling Instruments and Parts			441.8	457.7	3.6	9.7
Industrial Process-Type Instruments and Parts			38.6	39.3	1.8	5.6
Chemical Analysis Equipment and Parts			55.6	45.9	-17.4	9.2
Physical Analysis Equipment and Parts			38.7	45.0	16.3	11.1
Equipment for Testing Electrical, Radio and Communications Circuits and Parts			157.8	163.4	3.5	15.2
Instruments for Measuring or Checking Electrical Quantities and Parts			39.5	35.3	-10.6	15.6
Scientific, Professional and Medical Equipment			218.6	201.7	-7.7	10.4
Electromedical and Electrotherapeutic Apparatus and Parts (excl. X-ray equipment)			88.5	79.2	-10.5	10.2
Medical Equipment Based on X-Rays and Parts			49.5	30.7	-38.0	14.2
Other Medical, Dental and Surgical Instruments and Parts			53.9	75.7	40.4	10.2
Power-Generating Machinery (excl. aircraft and automotive engines)			108.6	87.6	-19.3	2.9
Gas Turbines and Parts for Mechanical Drives			39.2	24.6	-37.2	3.1
Nonfarm Tractors, Parts and Attachments			51.6	40.3	-21.9	2.0
Excavating and Paving Machinery			40.4	45.6	12.9	2.1
Parts and Accessories for Oil and Gas Field Drilling Machines			159.9	248.8	55.6	6.2
Machine Tools and Parts			72.3	68.2	-4.3	6.7
Commercial and Industrial Heating and Cooling Equipment and Parts			51.5	45.9	-10.9	4.8
Pumps and Compressors			45.1	47.0	4.2	2.5
Filtering and Purifying Machinery and Parts			59.4	53.2	-10.4	8.5
Taps, Cocks, Valves and Similar Devices and Parts			40.0	36.0	-10.0	4.2
Equipment for Service Industries			127.3	158.2	24.3	6.6
Amusement Park Equipment and Parts			2.2	35.3	1,504.5	78.8
Electric Machinery			583.1	571.7	-2.0	4.4
Semiconductors			167.8	189.4	12.9	5.0
Integrated Circuits			119.4	142.7	19.5	17.1
Radar Apparatus (excl. for planes and boats) and Parts			50.2	54.1	7.8	14.8
Generators, Transformers and Accessories			76.5	52.6	-31.2	2.6
Connectors			27.0	30.5	13.0	11.8
Loudspeakers, Microphones, Amplifiers and Parts			35.2	25.8	-26.7	12.2

Commodity	Quantity 1981	Quantity 1982	Value 1981	Value 1982	Percent Change 1981/82	Japan's Share of U.S. Exports 1982
Transportation Equipment			$1,451.3	$ 988.1	-31.9%	3.6%
Commercial Aircraft	18 passenger or cargo jet transports; 74 light planes and helicopters	7 passenger or cargo jet transports; 37 light planes and helicopters	814.5	420.5	-48.4	8.7
Aircraft Engines, Parts and Accessories			386.6	336.9	-12.9	6.9
Aircraft Engine Parts			104.4	153.0	46.6	10.8
New Cars	4,201 ut	3,149 ut	46.5	44.0	-5.4	1.5
Automotive Parts, Engines and Bodies			117.4	124.3	5.9	1.2
Consumer Goods			1,318.4	1,356.1	2.9	9.5
Pharmaceuticals			448.9	510.7	13.8	21.0
Bulk Antibiotics			133.3	141.3	6.0	22.0
Blood and Blood Derivatives			124.6	161.1	29.3	47.1
Diuretic Preparations			54.4	28.5	-47.6	72.4
Cigarettes	258,837,200 pk	237,644,800 pk	73.8	67.2	-9.8	5.4
Electric Household Appliances			37.9	29.9	-21.1	2.0
Stainless Steel Cooking and Kitchenware			20.2	43.2	113.9	67.0
Records and Consumer Electronics			28.6	24.0	-16.1	4.8
Toys and Sporting Goods			118.5	131.5	11.0	11.9
Golf Equipment			60.3	73.5	21.9	56.4
Still Film in Cartridges and Rolls	42,022,008 ut	42,762,067 ut	64.8	59.3	-8.5	16.7
Clothing			85.0	65.4	-23.1	6.9
Gem Diamonds and Other Gem Stones			69.9	54.0	-22.7	15.2
Jewelry and Antiques			55.5	47.3	-14.8	12.3
Printed Material			47.1	52.1	10.6	3.9
Miscellaneous			859.1	1,032.3	20.2	6.2

*Includes $182.2 million in Department of Defense shipments.
**Includes $298.2 million in Department of Defense shipments.

Key to quantity abbreviations:

bbl = barrels
bu = bushels
gal = gallons
lb = pounds
mcf = thousand cubic feet
pc = pieces
pk = packs
rba = running bales
sft = square feet
stn = short tons
toz = troy ounces
ut = units

Source: U.S. Department of Commerce, U.S. Exports: Schedule E Commodity by Country (FT 410), December 1981 and December 1982